

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

1 1-2. (Canceled)

1 3. (Currently Amended) The PWB of ~~claim 2~~ claim 5, wherein said free space
2 has a width D1 equal to twice the pitch D of said vias array less a via size, for
3 accommodating m passive elements of a substantially similar width D1.

1 4. (Currently Amended) The PWB of ~~claim 2~~ claim 3, wherein m is at least one.

1 5. (Currently Amended) ~~The PWB of claim 2, A printed wiring board (PWB) for~~
2 mounting a high performance integrated circuit, comprising:

3 on a top side of said PWB, a modified via array with BGA columns and BGA
4 rows of ball connection pads;

5 a modified vias array of plated through hole (PTH) vias, with each via column
6 Col(n) arranged between two respective BGA columns c(n) and c(n+1) and each via
7 row R(k) arranged between two respective BGA rows r(k) and r(k-1), wherein 2m
8 vias of said via column Col(i) placed in successive via rows R(j) to R(j+2m-1) of said

9 modified vias array are depopulated to obtain a free space on the back side of said
10 PWB, wherein 2m corresponding vias in a via column Col(i+1) adjacent to said via
11 column Col(i) and placed in said successive via rows R(j) to R(j+2m-1) of said vias
12 array are shared vias, wherein $n \geq 1$, $k \geq 2$, $2 \leq i < n$ and $j < k$, and wherein a first shared
13 via in said via column Col(i+1) and said via row R(j) provides a power contact to a
14 first associated ball contact pad in said via column c(i+1) and said via row r(j) and to
15 a second associated ball contact pad in said via column c(i+2) and said via row r(j).

1 6. (Previously Presented) The PWB of claim 5, wherein a second shared via in
2 said via column Col(i+1) and said via row R(j+1) provides a ground contact to a
3 third associated ball contact pad in said via column c(i+1) and said via row r(j+1)
4 and to a fourth associated ball contact pad in said via column c(i+2) and said via
5 row r(j).

1 7-10. (Canceled)

1 11. (Currently Amended) The PWB of claim 3, wherein said passive elements are
2 ~~0603, 0402, 0201 or smaller decoupling capacitors.~~

1 12. (Currently Amended) The PWB of claim 3, wherein said passive elements are
2 ~~0603, 0402, 0201 or smaller~~ resistors.

1 13. (Canceled)

1 14. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.06" X 0.03".

1 15. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.04" X 0.02".

1 16. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.02" X 0.01".

1 17. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.06" X 0.03".

1 18. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.04" X 0.02".

1 19. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.02" X 0.01".